

## REMARKS

### Status of the Claims

- Claims 1, 3-8, and 10-15 are pending in the Application after entry of this amendment.
- Claims 1-15 are rejected by the Examiner.
- Claims 1, 8, and 13 are amended by the Applicant.

Independent Claims 1, 8, and 13 are amended to include the aspects that the Gp interface is coupled between the WLAN and the inter-PLMN backbone or interface. Support for this amendment is provided in Figures 1 and 2 and the corresponding description thereof. Therefore, no new matter is added by the amendments to claims 1, 8, and 13.

### Claim Rejections Pursuant to 35 U.S.C. §103

Claims 1-6, 8-13, and 15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Publication No. 2002/047008 to Kallio in view of U.S. Patent No. 6,256,498 to Ludwig and in further view of U.S. Patent Publication No. 2002/0177431 to Hamilton et al. (Hamilton). Applicant respectfully traverses the rejection via amendment and the following comments.

The failure of an asserted combination to teach or suggest each and every feature of a claim remains fatal to an obviousness rejection under 35 U.S.C. § 103. Section 2143.03 of the MPEP requires the “consideration” of every claim feature in an obviousness determination. To render a claim unpatentable, however, the Office must do more than merely “consider” each and every feature for this claim. Instead, the asserted combination of the patents must also teach or suggest *each and every claim feature*. See *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974) (emphasis added) (to establish *prima facie* obviousness of a claimed invention, all the claim features must be taught or suggested by the prior art). Indeed, as the Board of Patent Appeals and

Interferences has confirmed, a proper obviousness determination requires that an Examiner make “a searching comparison of the claimed invention - *including all its limitations* - with the teaching of the prior art.” See *In re Wada and Murphy*, Appeal 2007-3733, citing *In re Ochiai*, 71 F.3d 1565, 1572 (Fed. Cir. 1995) (emphasis in original). “If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious” (MPEP §2143.03, citing *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)).

Amended claim 1 provides a wireless Local Area Network (WLAN) that includes an access point for communicating with a plurality of mobile stations and an interworking function within the WLAN that is coupled between the access point and a selected Public Land Mobile Network (PLMN) via an inter-PLMN backbone. The interworking function of the WLAN enables communications between the selected PLMN and the WLAN wherein the WLAN appears as another PLMN to the selected PLMN, and wherein the interworking function of the WLAN enables communications with a Serving General Packet Radio Service Support Node (SGSN) of the selected PLMN using a Gp interface that is coupled between the interworking function and the inter-PLMN backbone. For the reasons presented below, Kallio alone or in combination with Ludwig and/or Hamilton, fail to teach or suggest each feature of the present claimed arrangement.

Kallio in Figure 1 depicts an A-Interface Gateway (AGW) interface to the hotspot LAN 230. The AWG 310 is under the control of the Network Management System 300. See Kallio para. 0028. However, an A interface is a connection interface that is positioned between the Base Station Controller (BSC) and the Mobile Switching Center (MSC). The A interface is used for carrying traffic channels and the Base Station System Message Applications (BSSAPs) user part of the Signaling System 7 (SS7) stack. Therefore, as previously submitted, Kallio uses a fundamentally different and non-equivalent interface for facilitating communication. The function of the A interface facilitates messages between the BSC and the MSC. However, the A interface

is unable to enable “communications between the selected PLMN and the WLAN **wherein the WLAN appears as another PLMN to the selected PLMN**” as recited in the present claimed arrangement. Rather, the A interface merely coordinates a handoff procedure between nodes (see para. 0051). There is nothing that teaches or suggests advantageously displaying a WLAN as a PLMN to other PLMN via a backbone.

Furthermore, Kallio fails to teach or suggest “an interworking function **within the WLAN, coupled between the access point and a selected Public Land Mobile Network (PLMN)**, via an inter-PLMN backbone” as recited in claim 1. Instead, the A interface of Kallio is positioned within the GSM network 100. Moreover, Kallio fails to teach or suggest the use of a “Gp interface coupled between the interworking function and the inter-PLMN backbone” as recited in the claimed arrangement. There is no Gp interface in Kallio. Kallio only describes an A interface located within the GSM network and not within a WLAN (see Fig. 1 Kallio). Thus, in addition to the functional difference, Kallio fails to teach or suggest an equivalent network composition.

The present Office Action acknowledges that Kallio fails to teach or suggest the use of a Gp interface as in the claimed arrangement and cites Ludwig in support of the assertion that “the interworking function of the WLAN enabling communications between the selected PLMN and the WLAN wherein the WLAN appears as another PLMN to the selected PLMN” as recited in the present claimed arrangement. Applicant respectfully disagrees. Ludwig merely connects multiple PLMNs. Therefore, Ludwig does not need to modify how one of the PLMNs appears because they are both PLMNs. This is unlike the claimed arrangement which connects a WLAN and a PLMN and includes an interworking function that causes the WLAN to appear as another PLMN. Ludwig is not concerned with connecting WLANs and instead connects PLMNs.

Specifically, Ludwig fails to teach or suggest that the Gp interface is “coupled between the interworking function and the inter-PLMN backbone” as recited in the presently claimed arrangement. Instead, Ludwig merely cites border gateways of

respective PLMNs to facilitate communication via the Gp interface. Thus, unlike the claimed arrangement which includes a WLAN, Ludwig describes border gateways of PLMNs coupled between an inter-PLMN backbone and an intra-PLMN backbone (see Ludwig Fig. 1). Border gateways are elements specific to GPRS networks that connect intra and inter PLMN backbones to enable handoffs between different PLMNs. This is not equivalent to “a Gp interface coupled between the **interworking function** [of the WLAN] and the inter-PLMN backbone” that “enables communications with a Serving General Packet Radio Service Support Node (SGSN) of the selected PLMN” as in the presently claimed arrangement. A border gateway is unlike the claimed interworking function because a simple border gateway is unable to communicate with a WLAN backbone and thus fails to make a WLAN in which it is located look like another PLMN to other PLMNs.

The present Office Action further acknowledges that Kallio and Ludwig, alone or in combination fail to teach or suggest that “the interworking function of the WLAN enables communications with a Serving General Packet Radio Service Support Node (SGSN) of the selected PLMN using a Gp interface coupled between the interworking function and the inter-PLMN backbone” as in the present claimed arrangement. In support of this assertion, the Office Action cites paragraph 0040 of Hamilton. Applicant respectfully disagrees. The cited section of Hamilton (and elsewhere) merely describe a border gateway which is coupled between the inter and intra PLMN backbones. Moreover, as discussed above, the border gateway only connects actual PLMNs. A border gateway cannot connect a PLMN with a WLAN as performed by the present claimed “interworking function”. Therefore, the border gateway of Hamilton is NOT equivalent to the present claimed “interworking function within the WLAN, coupled between the access point and a selected Public Land Mobile Network (PLMN), via an inter-PLMN backbone, the interworking function of the WLAN enabling communications between the selected PLMN and the WLAN wherein the WLAN appears as another PLMN to the selected PLMN, and wherein the interworking function of the WLAN enables communications with a Serving General Packet Radio

Service Support Node (SGSN) of the selected PLMN using a Gp interface coupled between the interworking function and the inter-PLMN backbone".

On page 2 of the present Office Action, the Examiner disagrees with the arguments presented by the Applicant regarding Kallio and Ludwig because the Office Action asserts that one can merely substitute the A interface of Kallio with the Gp interface of Ludwig in order to produce the present claimed system. Specifically, it is asserted that one skilled in the art "often substitutes one feature of one system for another feature of another system" (Office Action, page 2). While this may be true, in order for this to occur, the parts being substituted must be equivalent and able to perform similar functions. In the present case, one cannot merely substitute the A interface in Kallio with a Gp interface of Ludwig and produce an operable system because each of these interfaces are positioned at different points in the network architecture and perform different and unrelated functions. The A interface is **within a particular GSM** and is used for carrying traffic channels and the BSSAP user part of the SS7 (signaling system 7) stack. In contrast, the Gp interface is defined **between two GSNs of different PLMNs** for exchanging the user profile and other signaling information. Therefore, one skilled in the art would not merely be able to substitute the A interface with the Gp interface. In fact, doing so would render the system inoperable because these interfaces facilitate different signaling and communications between different portions of the networks. Therefore, both interfaces have a different purpose and cannot be interchanged. Applicant respectfully submits that one of skill in the art recognizes these interfaces by different names (i.e. A versus Gp) because of the technical differences and differences of use of the two types of interfaces.

Since the cited combination of Kallio, Ludwig, and Hamilton does not teach or suggest the claimed combined aspects of an interworking function, that is part of a WLAN, that enables the WLAN to appear as another PLMN to a selected PLMN, and that the WLAN interworking function serves to connect to a SGSN using a Gp

interface as recited in the pending claims, then the pending claims are patentably distinct from the cited art.

Claims 3 – 7 are dependent on claim 1 and are considered patentable for the reasons presented above with regard to claim 1 per MPEP §2143.03. Therefore, it is respectfully submitted that Kallio (with Ludwig and/or Hamilton) fails to teach or suggest the features of claims 3 – 7. Consequently, withdrawal of the rejection of claims 3 – 7 is respectfully requested.

Independent claim 8 is considered patentable for the reasons presented above with respect to claim 1. Therefore, it is respectfully submitted that Kallio (with Ludwig and/or Hamilton) fails to teach or suggest the features of claim 8. Consequently, withdrawal of the rejection of claim 8 is respectfully requested.

Claims 10 – 12 are dependent on claim 8 and are considered patentable for the reasons presented above with regard to claim 8 per MPEP §2143.03. Therefore, it is respectfully submitted that Kallio (with Ludwig and/or Hamilton) fails to teach or suggest the features of claims 10 – 12. Consequently, withdrawal of the rejection of claims 10 – 12 is respectfully requested.

Independent claim 13 is considered patentable for the reasons presented above with respect to claim 1. Therefore, it is respectfully submitted that Kallio (with Ludwig and/or Hamilton) fails to teach or suggest the features of claim 13. Consequently, withdrawal of the rejection of claim 13 is respectfully requested.

Claim 15 is dependent on claim 13 and is considered patentable for the reasons presented above with regard to claim 13 per MPEP §2143.03. Therefore, it is respectfully submitted that Kallio (with Ludwig and/or Hamilton) fails to teach or suggest the features of claim 15. Consequently, withdrawal of the rejection of claim 15 is respectfully requested.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the 35 U.S.C. §103 rejection of pending Claims 1-6, 8-13, and 15 because these amended claims patentably define over the cited art.

Claims 7 and 14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Publication No. 2002/047008 to Kallio in view of U.S. Patent No. 6,256,498 to Ludwig, and in further view of U.S. Patent Publication No. 2002/0177431 to Hamilton et al. (Hamilton), and in further view of U.S. Patent No. 6,212,390 to Rune. Applicant respectfully traverses the rejection.

Claims 7 and 14 are dependent on claims 1 and 13, respectively and are considered patentable for the reasons presented above with respect to claim 1 as per MPEP §2143.03.

The Office Action asserts that Rune teaches the present claimed feature. However, Rune merely discusses dividing up a cellular mobile communications system into general geographic areas having geographic coordinates. However, like Kallio, Ludwig, and Hamilton, Rune also fails to teach or suggest “interworking function within the WLAN, coupled between the access point and a selected Public Land Mobile Network (PLMN), via an inter-PLMN backbone, the interworking function of the WLAN enabling communications between the selected PLMN and the WLAN wherein the WLAN appears as another PLMN to the selected PLMN, and wherein the interworking function of the WLAN enables communications with a Serving General Packet Radio Service Support Node (SGSN) of the selected PLMN using a Gp interface coupled between the interworking function and the inter-PLMN backbone” as in the present claimed arrangement. Therefore, withdrawal of the rejection of claims 7 and 14 is respectfully requested.

Applicant respectfully requests reconsideration and withdrawal of the 35  
U.S.C. §103 rejection of pending Claims 7 and 14.

**Conclusion**

Applicant respectfully submits that the amended pending claims patentably  
define over the cited art and respectfully requests reconsideration and withdrawal of all  
rejections of the pending claims. Applicant respectfully solicits reconsideration for a  
Notice of Allowance for all pending claims.

If there are any additional charges in connection with this requested  
amendment, the Examiner is authorized to charge Deposit Account No. 07-0832  
therefore.

Respectfully submitted,  
Verma et al.

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/Jerome G. Schaefer/

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